UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/704,281	11/01/2000	Craig Rubendall	343355600023	2712

7590	02/23/2004

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EXAMINER
NGUYEN, CINDY

ART UNIT	PAPER NUMBER
2171	

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)	
Office Action Summary		09/704,281	RUBENDALL, CRAIG	
		Examiner	Art Unit	
		Cindy Nguyen	2171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _01 November 2000_.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-46_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-5,14-32 and 39-46_ is/are rejected.
7) ☐ Claim(s) _6-13 and 33-38_ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _01 November 2000_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This is in response to application filed on 11/01/2000 in which claims 1-46 are presented for

examination.

1.   *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set

forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102
> of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art
> to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 2, 5, 15-17, 20-29, 40-42, 45 and 46 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ranger (U.S 5999940) in view of Motoyama et al. (U.S 6085196) (Motoyama

and further in view of Ainsbury et al. (U.S 6078924) (Ainsbury).

Regarding claims 1 and 28, Ranger discloses: A computer-implemented method and

apparatus for retrieving a subset of object data from a persistence layer over a network, wherein

the persistence layer (310, fig. 3, Ranger) is structured at least partially upon an object model

definition (col. 8, lines 18-48, Ranger) , comprising the steps of:

(a) receiving over the network (200, fig. 2, Ranger) a request from a client computer

(210, fig. 2, Ranger) for object persisted data stored in the persistence layer (310, fig. 3, Ranger);

(b) parsing the request to obtain search criteria and object association data, wherein the

object association data identifies at least one association between a pair of objects (col. 11, lines

51 to col. 12, lines 9, Motoyama);

(c) creating filtering criteria based upon the parsed search criteria and parsed object

association data, wherein the object model definition determines how the search criteria and the

object association data form the filtering criteria (col. 12, lines 30-49, Ranger);

(e) transmitting the object data subset to the client computer over the network (col. 14,

lines 3-19, Ranger).

However, Ranger didn't discloses: (b) parsing the request to obtain search criteria and

object association data, wherein the object association data identifies at least one association

between a pair of objects. On the other hand, Motoyama discloses: (b) parsing the request to

obtain search criteria and object association data, wherein the object association data identifies at

least one association between a pair of objects (col. 11, lines 51 to col. 12, lines 9, Motoyama).

Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in

the art to include the step parsing the request to obtain search criteria and object association data,

wherein the object association data identifies at least one association between a pair of objects in

the system of Ranger as taught by Motoyama. The motivation being to enable the system

analyzes and breaks down input documents into recognizable components parts to be passed to

other modules of the system (col. 11, lines 51-67, Motoyama).

However, Ranger/Motoyama didn't discloses: (d) filtering object data from the

persistence layer by the filtering criteria in order to generate the object data subset. On the other

hand, Ainsbury discloses: filtering object data from the persistence layer by the filtering criteria

in 15 order to generate the object data subset (col. 31, lines 48 to col. 32, lines 20, Ainsbury).

Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in

the art to include the step filtering object data from the persistence layer by the filtering criteria

in order to generate the object data subset in the combination system of Ranger/Motoyama as

taught by Ainsbury. The motivation being to enable the user view a list of items and their

associated properties in ascending or descending order based on a selected property (col. 31,

lines 48-52, Aimsbury).

In addition, Ranger/Motoyama/Ainsbury discloses: a server computer connected to the

network (200, 210, 220, fig. 2, Ranger);

A mapping module (331, fig. 3, Ranger) connected to the object model definition (321,

fig. 3, Ranger) and to the persistence layer (310, fig. 3, Ranger);

An object model definition that contains object class metadata (col. 6, lines 4-23,

Ranger).

Regarding claims 2 and 29, all the limitations of these claims have been noted in the

rejection of claims 1 and 28 above, respectively. In addition, Ranger/Motoyama/Aimsbury

discloses: wherein the request includes object criteria nodes and object association role nodes

(col. 11, lines 37-49, Aimsbury), said method further comprising the steps of:

parsing the request into object criteria nodes and object association role nodes (col. 13,

lines 12-28, Motoyama);

creating the filtering criteria based upon the parsed object criteria nodes and the parsed

object association role nodes (col. 14, lines 31-58, Motoyama).

Regarding claim 5, all the limitations of this claim have been noted in the rejection of

claim 2 above. In addition, Ranger/Motoyama/Aimsbury discloses: wherein parsed nodes

include the parsed object criteria nodes and the parsed association role nodes (col. 11, lines 51 to

col. 12, lines 10, Motoyama).

Regarding claims 15 and 40, all the limitations of these claims have been noted in the rejection of claims 1 and 28 above, respectively. In addition, Ranger/Motoyama/Aimsbury discloses: wherein the persistence layer is an object-oriented database management system (col. 6, lines 10-23, Ranger).

Regarding claims 16 and 41, all the limitations of these claims have been noted in the rejection of claims 1 and 28 above, respectively. In addition, Ranger/Motoyama/Aimsbury discloses: wherein the persistence layer is an XML formatted file (col. 10, lines 18-22, Ranger).

Regarding claims 17 and 42, all the limitations of these claims have been noted in the rejection of claims 1 and 28 above, respectively. In addition, Ranger/Motoyama/Aimsbury discloses: wherein the network is a network selected from the group consisting of local area networks, intranets , wide area networks, global networks, Internet, and combinations thereof (122, 128, 120, 102, fig. 1, 200, fig. 2, Range).

Regarding claims 20 and 45, all the limitations of these claims have been noted in the rejection of claims 1 and 28 above, respectively. In addition, Ranger/Motoyama/Aimsbury discloses: wherein the object model definition includes object class data, object attribute data, and object association data (313, fig. 3 and corresponding text, Ranger).

Regarding claims 21 and 46, all the limitations of these claims have been noted in the rejection of claims 1 and 28 above, respectively. In addition, Ranger/Motoyama/Aimsbury discloses: wherein the object model definition is based upon an entity relationship diagram definition (col. 7, lines 47-61, Ranger).

Regarding claim 22, all the limitations of this claim have been noted in the rejection of claim 21 above. In addition, Ranger/Motoyama/Aimsbury discloses: wherein the persistence

layer is a relational database management system (col. 6, lines 10-23, Ranger), said method

further comprising the steps of: creating a structured query language statement to be used as the

filtering criteria (col. 8, lines 30-40, Ranger), wherein the parsed search criteria and the parsed

object association data are formatted in accordance with metadata from the entity relationship

diagram definition in order to create the structure query language statement; and using the

created structured query language statement to retrieve query results from the relational database

management system (col. 8, lines 52 to col. 9, lines 39, Ranger).

Regarding claim 23, all the limitations of this claim have been noted in the rejection of

claim 22 above. In addition, Ranger/Motoyama/Aimsbury discloses: further comprising the steps

of: generating the object data subset by encoding the query results with tags to indicate object

associations, object attributes and object classes (col. 50, lines 57 to col. 52, lines 30, Aimsbury),

wherein the encoding with tags is performed based upon encoding rules means and upon

metadata from the entity relationship diagram definition (col. 50, lines 57 to col. 52, lines 30,

Aimsbury); and transmitting the encoded object data subset to the client computer over the

network (col. 14, lines 3-19, Ranger).

Regarding claim 24, all the limitations of this claim have been noted in the rejection of

claim 21 above. In addition, Ranger/Motoyama/Aimsbury discloses: wherein the encoding is

performed using Extensible Markup Language (XML) tags (col. 50, lines 57 to col. 52, lines 30,

Aimsbury), said method further comprising the step of: transmitting the encoded object data

subset to the client computer in order for the client computer to parse the encoded object data

subset by an XML searching mechanism (col. 50, lines 57 to col. 52, lines 30, Aimsbury).

Regarding claim 25, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Ranger/Motoyama/Aimsbury discloses: wherein in step (d) the filtering of the object data is performed when the object data is retrieved from the persistence layer (col. 14, lines 52 to col. 15, lines 21, Ranger).

Regarding claim 26, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Ranger/Motoyama/Aimsbury discloses: wherein in step (d) the filtering of the object data is performed when the object data is retrieved from the persistence layer using a portion of the parsed search criteria, and after the object data is retrieved from the persistence layer the object data is further filtered by criteria contained in the; other portions of the parsed search criteria (col. 14, lines 52 to col. 15, lines 21, Ranger).

Regarding claim 27, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Ranger/Motoyama/Aimsbury discloses: wherein in step (d) the filtering of the object data is performed after the object data is retrieved from the persistence layer (col. 14, lines 52 to col. 15, lines 21, Ranger).

3.   **Claims 3, 4, 14, 30 –32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranger (U.S 5999940) in view of Motoyama et al. (U.S 6085196) (Motoyama and further in view of Ainsbury et al. (U.S 6078924) (Ainsbury) and further in view of Bulletin of Technical Committee on Data Engineering, 09, 1999, vol. 22, No. 3 (Committee).**

Regarding claims 3 and 30, all the limitations of these claims have been noted in the rejection of claims 2 and 29 above. However, Ranger/Motoyama/Aimsbury didn't disclose: wherein the request alternates between an object criteria node and an object association role node. On the other hand, Committee discloses: wherein the request alternates between an object

criteria node and an object association role node (page 15).   Thus, at the time invention was

made, it would have been obvious to a person of ordinary skill in the art to include the step the

request alternates between an object criteria node and an object association role node. in the

combination system of Ranger/Motoyama/ Ainsbury as taught by Committee. The motivation

being to enable the user using SQL to query such a structure requires traversing arbitrary paths

through XML elements (page 15).

Regarding claim 32, all the limitations of this claim have been noted in the rejection of

claim 29 above. In addition, Ranger/Motoyama/Aimsbury/Committee discloses: wherein nodes

include the object criteria nodes and the association rule notes (page 15, Committee).

Regarding claims 4 and 31, all the limitations of these claims have been noted in the

rejection of claims 2 and 29 above. In addition, Ranger/Motoyama/Aimsbury/Committee

discloses: reviewing over the network from the client computer the request formatted in an

XPATH specification format (page 7-8, section 2.2).

Regarding claim 14, all the limitations of this claim have been noted in the rejection of

claim 1 above. In addition, Ranger/Motoyama/Aimsbury discloses: further comprising the step

of: encoding the object data subset with tags to indicate associations, attributes

and classes of objects that are in the object data subset (page 13-17, Bulletin of the Technical

committee),

wherein the encoding with tags is performed based upon encoding rules means

and upon metadata from the object model definition (page 13-17, Bulletin of the Technical

committee).

4.   Claims 18, 19, 39, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ranger (U.S 5999940) in view of Motoyama et al. (U.S 6085196) (Motoyama and further in view of

Ainsbury et al. (U.S 6078924) (Ainsbury) and further in view of Arief et al. "A UML tool for an

automatic generation of simulation programs", ACM 09, 2000.

Regarding claims 18 and 43, all the limitations of these claims have been noted in the

rejection of claims 1 and 28 above. However, Ranger/Motoyama/Aimsbury didn't disclose:

wherein the object model definition is based upon a Unified Modeling Language (UML) format.

On the other hand, Arief discloses: wherein the object model definition is based upon a Unified

Modeling Language (UML) format (section 2. Using UML, page 72, Arief). Thus, at the time

invention was made, it would have been obvious to a person of ordinary skill in the art to include

the object model definition is based upon a Unified Modeling Language (UML) format in the

combination system of Ranger/Motoyama/ Ainsbury as taught by Arief. The motivation being

enable the system represents as an interaction diagram, which consists of objects and their

relationships, including the messages that might be sent from one object to another (section 2.

Using UML, page 72, Arief)

Regarding claim 19, all the limitations of this claim have been noted in the rejection of

claim 18 above. In addition, Ranger/Motoyama/Aimsbury/Arief discloses: further comprising

the steps of: encoding the object data subset with tags to indicate object associations, object

attributes and object classes, wherein the encoding with tags is performed based upon encoding

rules means and upon metadata from the UML object model definition (section 5.3, page 75,

Arief).

As per claims 39 and 44, all the limitations of this claim have been noted in the rejection

of claims 43 and 19 and 28 above. In addition, Ranger/Motoyama/Aimsbury/Arief discloses:

wherein the server computer transmits the encoded the object data subset to the client computer

over the network (col. 14, lines 3-19, Ranger).

5. *Allowable Subject Matter*

Claims 6-13, 33-38 are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record and that encountered while searching for the claimed invention fails to

anticipate and/or suggest: A computer-implemented method and apparatus for retrieving a subset

of object data from a persistence layer over a network, wherein the persistence layer is structured

at least partially upon an object model definition, comprising the steps of: selecting, obtaining

and placing as recited in claims 6 and 33.

Regarding claims 7-13 and 34-38, these claims depend from claims 6 and 33 above respectively

and are therefore allowable.

6. *Contact Information*

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can

normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet

Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this

application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306

for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should

be directed to the receptionist whose telephone number is 703-305-3900.

cN

Cindy Nguyen
February 13, 2004

WAYNE AMSBURY
PRIMARY PATENT EXAMINER